



GENERAL ORDER

GENERAL ORDER 320.17

Ambulance Stretchers and Stair Chairs

EMERGENCY SERVICES BUREAU

Issue Date: April 10, 2015

Revision Date: January 07, 2021

1 APPLICABILITY

2 All Personnel

3 POLICY

4 The Howard County Department of Fire and Rescue Services (Department) shall set forth guidelines that
5 provide the appropriate level of safety for patients during stretcher and stair chair operations. This
6 includes, but is not limited to: requiring all straps provided on Department stair chairs and ambulance
7 stretchers to be used while the patient is being moved and during transport.

8 DEFINITIONS

- 9 ➤ **Stryker Medical** – a global medical technology company that provides solutions for pre-hospital
10 patient transport, response and resuscitation, and patient care data solutions.
- 11
- 12 ➤ **Power-PRO XT Ambulance Stretcher** – a powered ambulance stretcher featuring a battery-
13 powered hydraulic system to raise and lower with a rated capacity of 700 pounds.
- 14
- 15 ➤ **Power-LOAD Power Stretcher Fastener System** – a powered lifting system designed to assist in
16 the loading and unloading of patients into and out of transport units and securely fastening either
17 stretcher system to the ambulance floor; the rated capacity is 830 pounds.
- 18
- 19 ➤ **MX – PRO R3 Manual Ambulance Stretcher** – a manually operated stretcher, similar in design to
20 Power-Pro XT stretcher, and can be utilized with a Power-LOAD system if retrofitted; the rated
21 capacity is 650 pounds.
- 22
- 23 ➤ **MX- PRO Bariatric Ambulance Stretcher** – a manually operated stretcher designed specifically to
24 safely transport bariatric patients. Rated for 850 pounds, up to 32 inches in height, and 1600
25 pounds collapsed. Stretcher is designed to be used in conjunction with specific handrails, ramps
26 and electric winch and tow point for loading and unloading patients.
- 27
- 28 ➤ **Stair-Pro Stair Chair** – a compact and foldable chair system designed to move non-ambulatory
29 patients up and down stairs, equipped with a track system to increase patient safety and reduce
30 personnel strain.
- 31

33 PRIOR TO PLACING THE PATIENT ON A STRETCHER OR STAIR CHAIR:

- 34 • Assess patient size and weight in relation to the capacity of the stretcher/stair chair in use. If the
35 patient exceeds the weight limit of the equipment or cannot be secured due to large body habitus
36 by using all straps with side-rails locked, a bariatric response shall be requested.
- 37 • Assess for and request additional personnel to the scene for obese patients or anticipated travel
38 with the patient over potentially treacherous terrain when moving to the ambulance.

39

40 SECURING AND MOVING A PATIENT ON THE STRETCHER:

- 41 • Personnel shall use all five (5) straps provided with the stretcher. The shoulder straps with the
42 foot strap shall be used when operating the stair chair.
- 43 • For pediatric transport, children must be placed in a Department-issued pediatric transport
44 device.
- 45 • Stretcher strap placement shall be at the patient's knees, hips, chest, and over shoulders.
- 46 • Personnel shall make every effort not to carry medical equipment on the stretcher.
- 47 • Once the patient is secured to the stair chair or stretcher, the patient shall never be left
48 unattended.
- 49 • When placing a patient on a backboard and using the shoulder straps provided on the stretchers,
50 slide the shoulder straps to the outside rail of the stretcher and miss the head blocks, keeping the
51 straps up over the patient's shoulders.
- 52 • All straps shall be kept fastened and snug anytime they are in place.
- 53 • Stretcher straps shall be in place prior to the ambulance moving.
- 54 • While in motion, personnel shall grasp stretchers and stair chairs with both hands at all times.
- 55 • Patients should be transported on stretchers and stair chairs feet first unless proceeding up a
56 flight of steps. When proceeding up a flight of steps, personnel should proceed with the patient's
57 head first.
- 58 • Patients on stretchers should NEVER be moved sideways.
- 59 • Lower the stretcher as much as practical when moving on a non-solid surface.
- 60 • Approach obstacles and grade changes squarely and slowly. Lift each set of wheels over the
61 obstacle separately.

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63 EXCEPTIONS FOR PATIENT TRANSPORT:

- 64 • Once placed, all safety restraints shall remain in place at all times. The only exceptions are:
 - 65 ○ Should the patient have an injury that would be worsened or aggravated by the use of a
66 strap, personnel may elect not to use the strap in that area.
 - 67 ○ When it is necessary to release the strap to perform a procedure for patient care.
 - 68 ○ When the patient cannot tolerate the strap.
 - 69 ○ When the patient refuses to wear any of the straps:
 - 70 ■ The stretcher should be lowered to the lowest practical rolling height before
71 moving without compromising proper body mechanics of personnel.
- 72 • Occurrences of any exception shall be documented on the Patient Care Record (PCR). If a strap is
73 temporarily removed for a procedure, the strap shall be re-secured as soon as the procedure is
74 completed.

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79 **MAINTENANCE AND DAMAGE TO STRETCHER/STAIR CHAIR:**

- 80 • All personnel are responsible to ensure that ambulance stretchers are maintained in proper
- 81 working order.
- 82 • Crews shall ensure that all assigned ambulance stretchers, Power-Load systems, and stair chairs
- 83 are properly cleaned following Stryker’s customer guidance (Attachment A).
- 84 • Maintenance issues or request for service shall be initiated via SNAP. This can be completed by
- 85 navigating the Department’s intranet homepage under the “HELP DESKS” tab and then “Stryker
- 86 Service Request.” This shall be used for all requests related to any of the following:
 - 87 ○ Power-PRO XT Ambulance Stretcher
 - 88 ○ Power-LOAD Power Stretcher Fastener System
 - 89 ○ MX-PRO R3 Manual Ambulance Stretcher
 - 90 ○ MX-PRO Bariatric Ambulance Stretcher
 - 91 ○ Stair-Pro Stair Chair
- 92
- 93 • A County Loss/Damage Report must also be completed. Any damage that could possibly result in
- 94 equipment failure and potential injury requires that the stretcher be removed from service.
- 95 • In the event of an incident resulting in patient injury, the appropriate Medical Duty Officer and the
- 96 Safety Officer shall be contacted immediately.
 - 97 ○ Documentation of the incident will be in the PCR.
- 98

99 **ASSET IDENTIFICATION AND LOCATION:**

- 100 • All ambulance stretchers will be clearly marked and identified respectively as to what unit it is
- 101 assigned. Two identifying decals will be located on all stretchers: one placed on the top rail of the
- 102 head end and one in the foot end, on top of the battery housing.
- 103 • All stair chairs will be clearly marked and identified respectively as to what unit it is assigned. One
- 104 identifying decal will be located on the left-hand side of the chair along the seat back frame rail.
- 105 • It will be expected that units maintain possession of stretchers and stair chairs assigned to that
- 106 unit. This order does not preclude the movement or exchange of stretchers and stair chairs
- 107 between units as needed to allow for proper care and movement of patients requiring treatment
- 108 and transport in our care. If a stretcher or stair chair is exchanged between units, every effort
- 109 shall be made to return it to the proper unit at the earliest possible convenience, upon conclusion
- 110 of the call.

111 **REFERENCES**

- 112 • None

113 **SUMMARY OF DOCUMENT CHANGES**

- 114 • New General Order format
- 115 • Removed name of previous maintenance vendor
- 116 • Outlined how to request service
- 117 • Outlined stretcher and stair chair labeling

118 **FORMS/ATTACHMENTS**

- 119 • Attachment A: Customer Guidance - Cleaning Stryker’s Emergency Care Products
- 120 • Attachment B: Power-LOAD Troubleshooting Guide

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APPROVED

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Author:

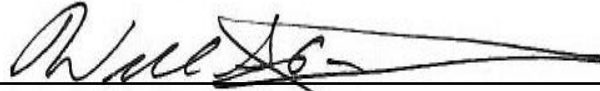
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William Anuszewski, Fire EMS Chief
Office of the Fire Chief



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Customer guidance:

Cleaning Stryker's Emergency Care products

Many customers have reached out with questions regarding the type of cleaning agents that can be used on their Stryker devices.

The following guidance can be used for cleaning the products listed below. This information can be referenced in the Operations Manual (OM)/Operating Instructions (OI)/Instructions for Use (IFU) for each product. The OM/OI/IFU remains the sole source for product information.

In addition to the cleaning agents listed below from the Stryker OM/OI/IFU, the Environmental Protection Agency (EPA) has released a list of disinfectants suitable for COVID-19, some of which may be used on Stryker products, providing that the OM/OI/IFU do not say otherwise. The list is updated regularly and is available here:

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>. If a product or cleaning method is not listed in the applicable OM/OI/IFU, Stryker has not tested it and its use may damage the product.

Product(s)	Suggested cleaners
LIFEPAK® monitor/defibrillators LIFEPAK AEDs	<ul style="list-style-type: none"> • Quaternary ammonium compounds • Isopropyl alcohol • Peracetic (peroxide) acid solutions <p>DO NOT clean any part of this device or its accessories with bleach, bleach dilution, or phenolic compounds. Do not use abrasive or flammable cleaning agents.</p>
HeartSine® samaritan® PAD	<ul style="list-style-type: none"> • Soapy water • Isopropyl alcohol (70% solution) <p>DO NOT clean the samaritan PAD with abrasive materials, cleaners or solvents.</p>
LUCAS® chest compression system	<ul style="list-style-type: none"> • 70% isopropyl alcohol solution • 45% isopropyl alcohol solution with added detergent • Quaternary ammonium compound • 10% bleach • Peracetic (peroxide) acid solutions
Power-PRO™ powered ambulance cot Performance-PRO™ manual ambulance cot	<ul style="list-style-type: none"> • Quaternary cleaners (active ingredient – ammonium chloride) that contain less than 3% glycol ether • Phenolic cleaners (active ingredient – o-phenylphenol) • Chlorinated bleach solution (5.25% – less than 1 part bleach to 100 parts water) • ≤ 21% isopropanol alcohol <p>DO NOT USE Virex® TB or Iodophor type disinfectants</p>

Medical

MX-PRO® R3 manual ambulance cot MX-PRO® bariatric transport cot Stair-PRO® stair chair	Unless otherwise noted below, use concentrations recommended by the manufacturer: <ul style="list-style-type: none"> • Quaternary cleaners (active ingredient – ammonium chloride) • Phenolic cleaners (active ingredient - o-phenylphenol) • Chlorinated bleach solution (5.25% - less than 1 part bleach to 100 parts water) <p>DO NOT USE Virex® TB or Iodophor type disinfectants</p>
Altrix® temperature management system	Consult the product’s Operations Manual and Disinfection Guide at http://techweb.stryker.com/Temp_Management/index.html
McGRATH® MAC EMS video laryngoscope	Consult the product’s Instructions for Use directly at https://www.strykeremergencycare.com/disclosure-and-safety-information/

If you have any questions about this matter, contact Stryker at 1-800-787-9537, option 2, 8:00 A.M. to 6:00 P.M. (Eastern time), Monday – Friday.

Resources

Links to Operating Instructions/Instructions for Use for all products:

- LIFEPAK Defibrillators, AEDs, CPR devices, video laryngoscope and accessories: <https://www.strykeremergencycare.com/disclosure-and-safety-information/>
- HeartSine samaritan PADs: <https://heartsine.com/brief-summary-indications-important-safety-information/>
- Ambulance cots and accessories: <https://techweb.stryker.com/EMS/index.html>
- Temperature management system: http://techweb.stryker.com/Temp_Management/index.html

List N: Products with Emerging Viral Pathogens AND Human Coronavirus claims for use against SARS-CoV-2: <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

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Power-LOAD[®]

Cot Fastener System

Troubleshooting guide



Introduction

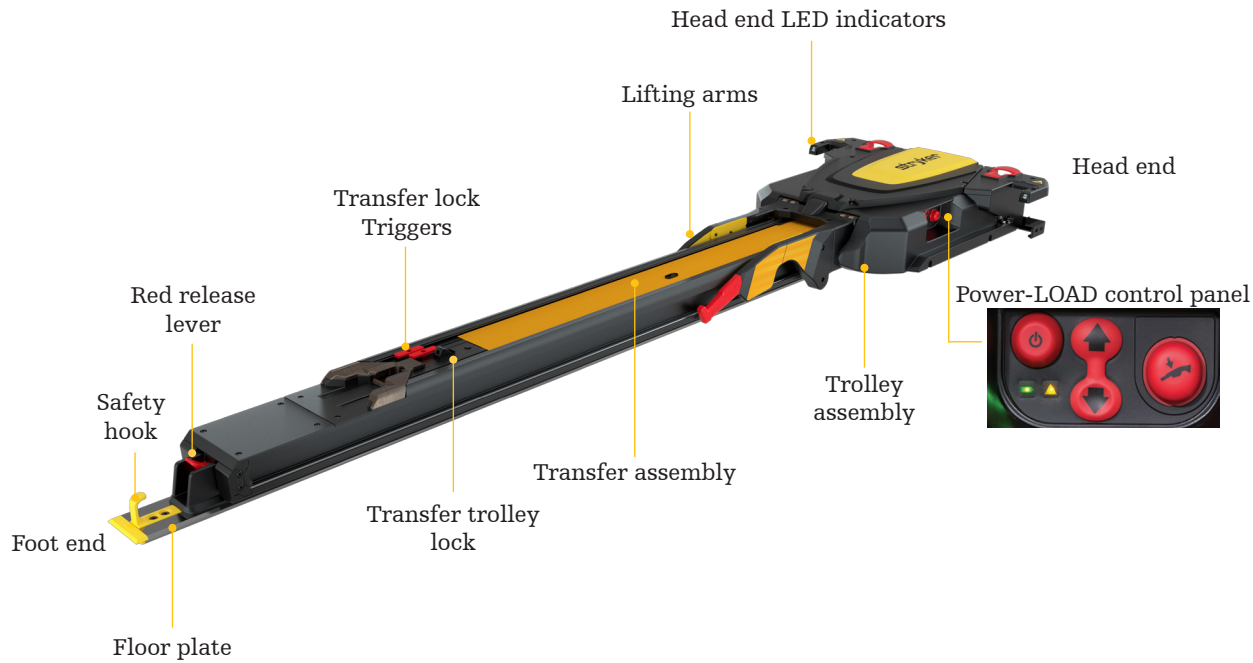
disclaimer

These instructions are only intended to serve as short-term solutions. Please contact your local Stryker Service Technician or Account Manager to schedule a maintenance inspection following any incident where troubleshooting is required. Please see your manual for complete troubleshooting information.

Introduction

diagram

Attachment B



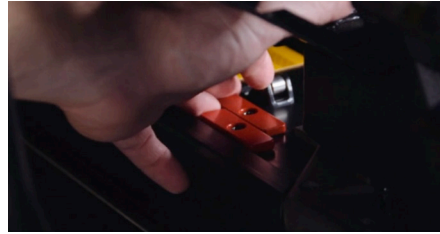
Cot gets stuck when unloading

Attachment B

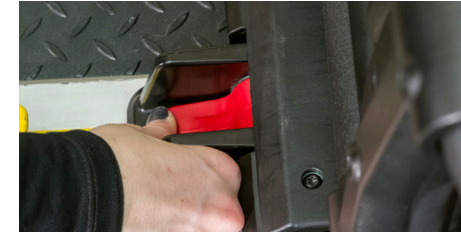


Scenario

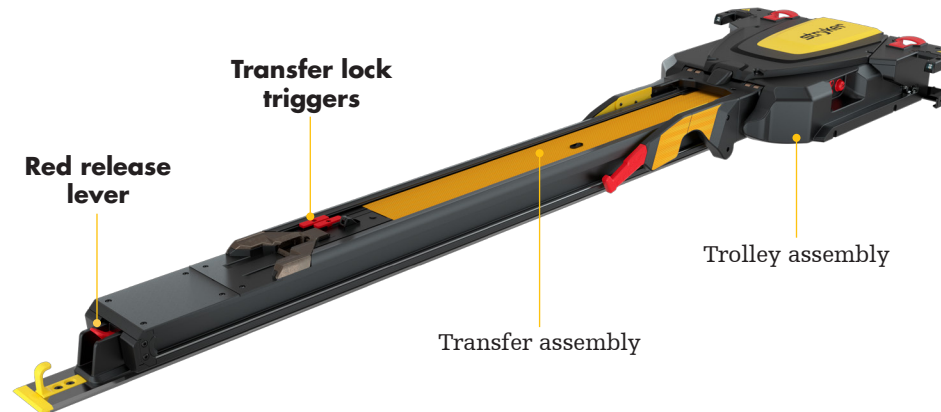
Cot gets stuck halfway out when you press the red release lever at the foot end of the anchor.



1. Pull the patient left transfer lock trigger and push the cot back into the vehicle until it locks into place.

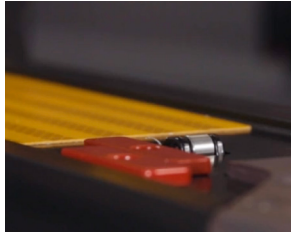


2. Hold down the red release lever at the foot end of the anchor with your thumb and use your knuckle to hold the transfer in place while you pull the cot toward you until it raises up. Pull the cot out to unload.



Cot gets stuck when loading

Attachment B



Scenario

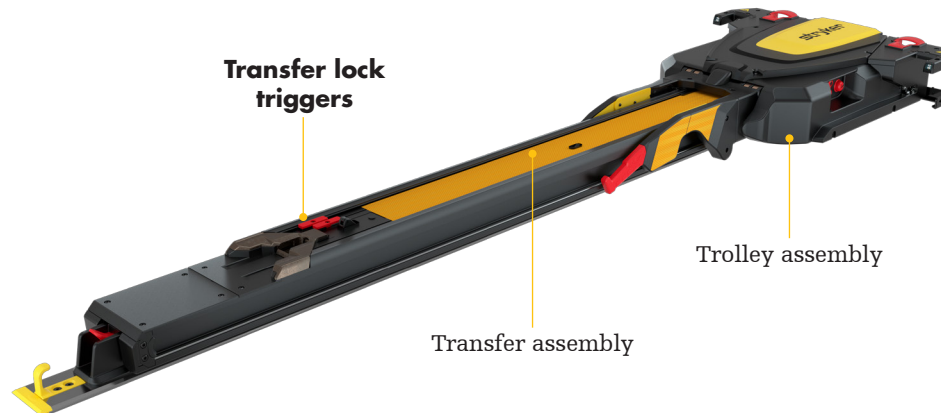
Trolley and cot get stuck halfway out when loading.

1. Check for debris in the transfer trolley lock.

2. Remove the debris so the roller will spring up. If there is no debris, see step 4.

3. Pull the cot and trolley all the way out of the vehicle to reset. Load the cot into the vehicle. The trolley will then lock into place.

4. If there is no debris in the transfer trolley lock, pull the patient left transfer lock trigger. Load the cot into the vehicle.



Cot will not unlock from the trolley

Attachment B



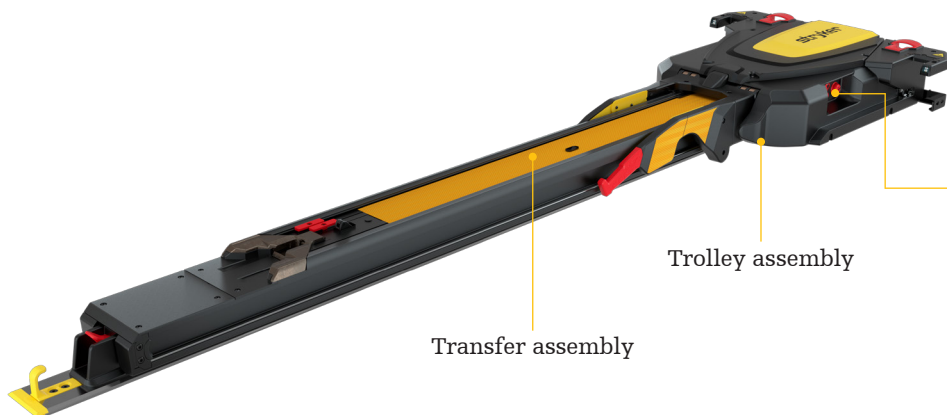
Scenario

Cot will not release from the trolley in the loading position and the error LED is illuminated.

1. Firmly press the manual release button on the Power-LOAD control panel to release pressure in the hydraulics.

2. To lower the lifting arms, press the extend (+) button on the cot or press down (↓) on the Power-LOAD control panel.
Note - You may need to apply pressure to the lifting arms while you press the manual release button to lower the lifting arms completely.

3. Remove the cot from the trolley.



Power-LOAD control panel:



Manual release button

Battery LED

Error LED

Cot does not lower and lock into the transfer

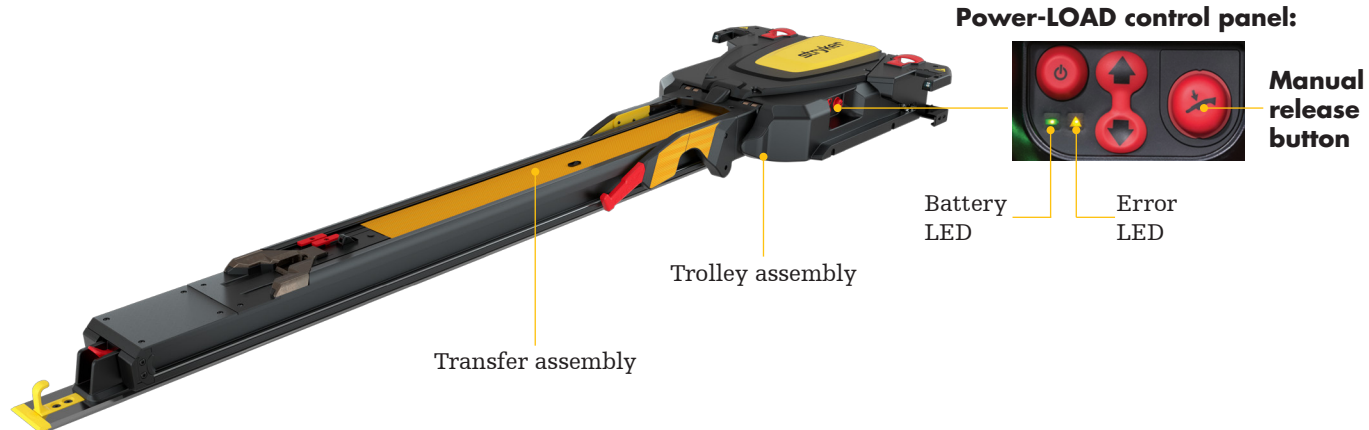
Attachment B



Scenario

Trolley arms do not lower to lock the cot into the transfer when loading.

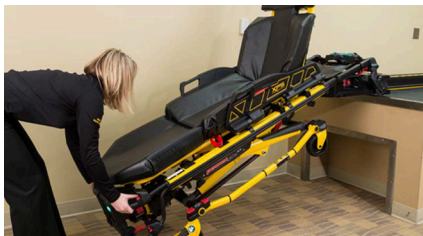
1. Firmly press the manual release button on the Power-LOAD control panel. The cot will then lower and lock into the transfer.



Cot locked into the trolley

in the load position

Attachment B

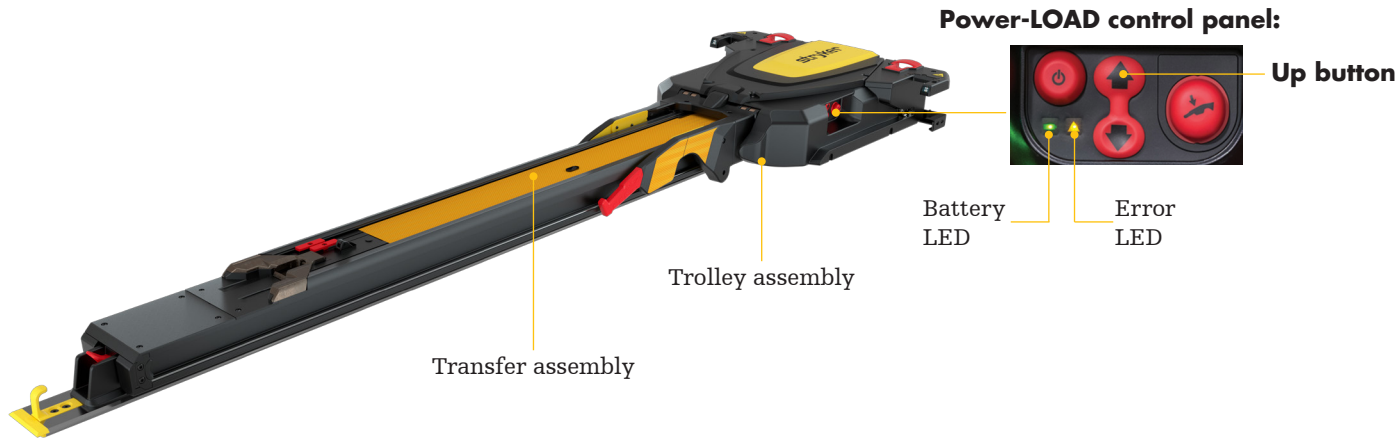


Scenario

Cot begins to collapse and the trolley lifting arms do not raise.

1. Press up (↑) on the Power-LOAD control panel to raise the cot until the lifting arms stop.

2. At the foot end of the cot, press the retract (-) button to raise the cot legs. Load the cot into the vehicle.



Power-LOAD lifting arms

stop when loading

Attachment B



Scenario

Lifting arms are not centered between the cot legs and amber head end LED indicators are flashing.

1. Realign the cot to center the lifting arms between the cot legs and the head end LED indicators are solid green.

2. Press up (↑) on the Power-LOAD control panel or the retract (-) button on the cot to resume loading.

